

Notice of Allowability

Application No.

09/783,518

Examiner

Susy N Tsang-Foster

Applicant(s)

IMAI ET AL.

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to applicant's amendment filed on 11/14/2003.
2. ☒ The allowed claim(s) is/are 1-5 and 16-18.
3. ☒ The drawings filed on 18 September 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Allowable Subject Matter

1. Claims 1-5, and 16-18 are allowed.
2. The following is an examiner's statement of reasons for allowance:

The closest prior art of record, JP 08-041683 A discloses a nickel-cadmium battery or a nickel hydride battery (both of which are alkaline rechargeable batteries) comprising a collector including a nonwoven fabric containing crimped fibers laminated to an open-cell synthetic resin sheet and the laminate is plated with a nickel film (see paragraphs 1, 5, and 18 of machine translation). The IPDL JPO Machine Translation for JP 08-041683 A also discloses that the crimped fibers are bicomponent fibers of the sheath-core type fibers and that the crimped fibers can be made from olefins such as polyethylene and polypropylene (see paragraphs 12-19 of machine translation).

However, IPDL JPO Machine Translation for JP 08-041683 A reference does not disclose, teach, or suggest the distinguishing feature of hydrophilizing the nonwoven fabric by one of sulfonation, gaseous fluorine treatment, and vinyl monomer grafting such that the nonwoven fabric possess a negative electrical charge prior to nickel plating the nonwoven fabric.

In contrast, the JP 08-041683 A reference discloses that the metal plating is done by the method of applying conductive material which liquefied with a suitable binder such as a paint and a conductive resin solution, sinking in the method of carrying out metal vacuum evaporation to a direct object, and giving conductivity or the method of giving conductivity by the

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electroless-deposition method by silver mirror reaction (see paragraph 18 of machine translation).

Applicant argues in the amendment filed on 11/14/2003 on page 5 in reference to the JP 08-041683 A that "the cited reference does not disclose that the materials have been hydrophilized by sulfonation, gaseous fluorine treatment, or vinyl monomer grafting and so do not possess a negative or positive charge as claimed by the Applicants". The Examiner would like to point out that the positive charge was not claimed in the claims by the applicant. Furthermore, applicant also argues on page 5 in the amendment filed on 11/14/2003 that a nonwoven fabric hydrophilized by any one of the above treatments will have a uniform and fine negative charge over the entire region of fabric, so that the plated nickel film of the collector will be tightly bonded to the nonwoven fabric, improving conductivity and preventing the scaling off typically experienced over time with existing alkaline battery technology and the products recited in claims 1-5 and 16-18 are structurally different from those disclosed in the cited reference.

Applicant arguments overcome the art rejections based on the JP 08-041683 A reference.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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3. Any inquiry concerning this communication or earlier communications should be directed to examiner Susy Tsang-Foster, Ph.D. whose telephone number is (571) 272-1293. The examiner can normally be reached on Monday through Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at (571) 272-1292.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

st/ *Susy Tsang Foster*

Susy Tsang-Foster
Primary Examiner
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